

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte FREDERICK M. DISCENZO, DUKKI CHUNG, JOSEPH K. ZEVCHEK, JAN BEZDICEK, ONDREJ FLEK, BOHUMIR SLADEK, PETR TUSLA, JIRI RYBA, SARAT BABU VETCHA, PETER J. UNSWORTH, DRAGICA KOSTIC-PEROVIC, SRDJAN PEROVIC, MUSLUM ARKAN, and KENNETH A. LOPARO

Appeal 2007-0968
Application 09/965,545
Technology Center 2100

Decided: April 17, 2007

Before JAMES D. THOMAS, JOSEPH F. RUGGIERO, and JOSEPH L. DIXON, *Administrative Patent Judges*.

RUGGIERO, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from the Final Rejection of claims 1-8, 12-22, and 24-42. We have jurisdiction under 35 U.S.C. § 6(b).

Appellants' invention relates to a method and system for controlling, diagnosing, and providing a prognosis of the health of a motorized system.

We affirm.

Claim 1 is illustrative of the invention and it reads as follows:

1. A method for controlling a motorized system comprising:
 - measuring an attribute of the motorized system, the attribute comprises at least one of vibration, speed, temperature, pressure, and current in the motorized system;
 - diagnosing a health of the motorized system based on the measured attribute;
 - providing a diagnostics signal based on the diagnosed health;
 - prognosing a state of the motorized system based at least in part on the at least one sensed attribute and/or the diagnosed state;
 - providing a control signal based at least in part on the diagnosed health and the prognosed state; and
 - providing a feedback operation that adjusts the control signal to extend the lifetime of the motorized system to a specific time horizon.

The Examiner relies on the following prior art references to show unpatentability:

| | | |
|-----------|-----------------|---------------|
| Grayson | US 5,111,531 | May 5, 1992 |
| Eidson | US 5,586,305 | Dec. 17, 1996 |
| McConnell | US 6,002,232 | Dec. 14, 1999 |
| Madhavan | US 6,004,017 | Dec. 21, 1999 |
| Hays | US 6,260,004 B1 | Jul. 10, 2001 |

Claims 1-5, 18-22, 24, 30, 35-38, 40, and 41 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Madhavan. Claims 6-8, 12-17, 25-29, 31-34, 39, and 42 stand rejected under 35 U.S.C. § 103(a). As evidence

of obviousness, the Examiner adds Hays to Madhavan with respect to claims 6-8, 12-14, 25-29, and 42, adds Eidson to Madhavan with respect to claims 15-17 and 31-34, and adds Grayson to Madhavan with respect to claim 39. In a separate rejection under 35 U.S.C. § 102(e), claims 1, 19, and 22 stand rejected as being anticipated by McConnell.

ISSUES

Under 35 U.S.C § 102(e), does Madhavan have a disclosure which anticipates the invention set forth in claims 1-5, 18-22, 24, 30, 35-38,40, and 41, and does McConnell have a disclosure which anticipates the invention recited in claims 1, 19, and 22? Specifically, does either, or both, of Madhavan and McConnell disclose a feedback control system which adjusts a control signal to extend the life of a motorized system to a specific or predetermined time horizon?

Under 35 U.S.C § 103(a), with respect to appealed claims 6-8, 12-17, 25-29, 31-34, 39, and 42, has the Examiner established a prima facie case of obviousness based on Madhavan taken in various combinations with the secondary references to Hays, Eidson, and Grayson?

PRINCIPLES OF LAW

1. ANTICIPATION

It is axiomatic that anticipation of a claim under § 102 can be found if the prior art reference discloses every element of the claim. *See In re King*, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986) and *Lindemann*

Maschinenfabrik GMBH v. American Hoist & Derrick Co., 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984).

In rejecting claims under 35 U.S.C. § 102, a single prior art reference that discloses, either expressly or inherently, each limitation of a claim invalidates that claim by anticipation. *Perricone v. Medicis Pharmaceutical Corp.*, 432 F.3d 1368, 1375-76, 77 USPQ2d 1321, 1325-26 (Fed. Cir. 2005), citing *Minn. Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1565, 24 USPQ2d 1321, 1326 (Fed. Cir. 1992). Anticipation of a patent claim requires a finding that the claim at issue “reads on” a prior art reference. *Atlas Powder Co. v. IRECO, Inc.*, 190 F.3d 1342, 1346, 51 USPQ2d 1943, 1945 (Fed Cir. 1999) (“In other words, if granting patent protection on the disputed claim would allow the patentee to exclude the public from practicing the prior art, then that claim is anticipated, regardless of whether it also covers subject matter not in the prior art.”) (internal citations omitted).

2. OBVIOUSNESS

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of establishing a prima facie case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). See also *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). The Examiner can satisfy this burden by showing that some objective teaching in the prior art or knowledge generally available to one of ordinary skill in the art suggests the claimed subject matter. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Only if this initial burden is met does the burden of coming forward with evidence or argument

shift to the Appellant. *Oetiker*, 977 F.2d at 1445, 24 USPQ2d at 1444. See also *Piasecki*, 745 F.2d at 1472, 223 USPQ at 788. Thus, the Examiner must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the Examiner's conclusion.

ANALYSIS

35 U.S.C. § 102(e) REJECTIONS

With respect to the 35 U.S.C. § 102(e) rejection of independent claims 1, 19, 22, and 36 based on the teachings of Madhavan, the Examiner indicates (Answer 6-7) how the various limitations are read on the disclosure of Madhavan. In particular, the Examiner directs attention to various portions of the disclosure at columns 1-3 of Madhavan.

In our view, the Examiner's analysis is sufficiently reasonable that we find that the Examiner has at least satisfied the burden of presenting a prima facie case of anticipation. The burden is, therefore, upon Appellants to come forward with evidence and/or arguments which persuasively rebut the Examiner's prima facie case. Only those arguments actually made by Appellants have been considered in this decision. Arguments which Appellants could have made but chose not to make in the Briefs have not been considered and are deemed to be waived [see 37 C.F.R. § 41.37(c)(1)(vii)].

Appellants' arguments in response assert that the Examiner has not shown how each of the claimed features is present in the disclosure of Madhavan so as to establish a prima facie case of anticipation. Appellants'

arguments (Br. 9-10; Reply Br. 6-7) focus on the contention that, in contrast to the claimed invention, Madhavan does not disclose the adjustment of a control signal to extend the life of a system to a “specific time horizon.”

Our review of the disclosure of Madhavan reveals that, although the Examiner relied on the principle of inherency in making the rejection, such a reliance is not necessary to establish a case of anticipation. Appellants’ arguments to the contrary notwithstanding, we find an explicit disclosure in Madhavan of adjusting a control signal to extend the life of system to a specific point in time, i.e., a specific time horizon as claimed.

As described by Madhavan (col. 2, ll. 16-28), an attribute of a motorized system such as vibration is analyzed to predict when a limit cycle oscillation condition such as “chatter” may occur during a machining operation. An input signal to the system, such as spindle speed, is then adjusted to prevent the “chatter” condition from occurring (Madhavan, col. 3, ll. 18-27). In our view, this disclosure of Madhavan explicitly teaches the adjustment of an input control signal, such as spindle speed, to extend the life of a machining system to, and beyond, a specific or predetermined time, i.e., the point in time or “time horizon” at which damaging machine “chatter” is predicted to emerge.

In view of the above discussion, since all of the claimed limitations are present in the disclosure of Madhavan, the Examiner’s 35 U.S.C. § 102(e) rejection of independent claims 1, 19, 22, and 36, as well as dependent claims 2-5, 18, 20, 21, 24, 30, 35, 37, 38, 40, and 41 not separately argued by Appellants, is sustained.

We do not, however, sustain the Examiner’s 35 U.S.C. § 102(e) rejection of independent claims 1, 19, 22 based on the McConnell reference.

We do agree with the Examiner that the feedback control system described by McConnell will adjust control signals input to the motorized system to reduce system disturbances such as unwanted vibrations, thereby extending the lifetime of the motorized system. We find, however, that McConnell's disclosure includes nothing more than a generalized teaching of improving the health of motorized system by adjusting control inputs which would extend system lifetime to some indefinite point in the future. It is our opinion, as also argued by Appellants (Br. 6-8; Reply Br. 2-6), that the only way McConnell's disclosure could satisfy the requirements of claims 1, 19, and 22 is to improperly read out the language "specific time horizon" from the claims. Our reviewing courts have held that, in assessing patentability of a claimed invention, all the claim limitations must be suggested or taught by the prior art. *In re Royka*, 490 F.2d 981, 984, 180 USPQ 580, 582 (CCPA 1974). All words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

35 U.S.C. § 103(a) REJECTIONS

Appellants' arguments in response to the Examiner's obviousness rejections of dependent claims 6-8, 12-17, 25-29, 31-34, 39, and 42 based on varying combinations of Madhavan with the secondary references to Hays, Eidson, and Grayson reiterates those arguments made alleging the deficiency of Madhavan in disclosing a control system which extends the lifetime of a motorized system to a "specific time horizon." For all of the reasons discussed, *supra*, we find such arguments to be unpersuasive. We also find no error in the Examiner's assertion of obviousness (Answer 12-17) to the

ordinarily skilled artisan of combining the teachings of Hays, Eidson, and Grayson with Madhavan to address, respectively, the claimed motorized pump, wireless network transmission, and non-linear training features of rejected dependent claims 6-8, 12-17, 25-29, 31-34, 39, and 42.

Accordingly, since the Examiner's prima facie case of obviousness has not been overcome by any convincing arguments from Appellants, we sustain the Examiner's 35 U.S.C. § 103(a) rejections of claims 6-8, 12-17, 25-29, 31-34, 39, and 42.

CONCLUSION

In summary, we have not sustained the Examiner's 35 U.S.C. § 102(e) rejection of claims 1, 19, and 22 based on McConnell. With respect to all of the appealed claims 1-8, 12-22, and 24-42, however, we have sustained the Examiner's 35 U.S.C. § 102(e) rejection of claims 1-5, 18-22, 24, 30, 35-38, 40, and 41 based on Madhavan as well as the 35 U.S.C. § 103(a) rejections of claims 6-8, 12-17, 25-29, 31-34, 39, and 42 based on various combinations of Madhavan with the secondary references. Therefore, the decision of the Examiner rejecting claims 1-8, 12-22, and 24-42 is affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv)(effective September 13, 2004).

AFFIRMED

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